

**Amendments to Claims**

This listing of claims will replace all prior versions and listing of claims in the application:

**Listing of Claims**

1. (previously presented) A detector comprising:
  - a first wafer having a cathode;
  - a second wafer having a chamber, formed on the first wafer;
  - a third wafer, having an anode, formed on the second wafer; and
  - a eutectic bond between at least one of the first and second wafers or between the second and third wafers.
2. (original) The detector of claim 1, wherein the chamber is sealed from an environment external to the chamber.
3. (original) The detector of claim 2, wherein the third wafer is transparent to detectable light.
4. (original) The detector of claim 3, wherein the chamber contains a gas.
5. (original) The detector of claim 4, wherein the gas is a mixture of H<sub>2</sub> and Ne.
6. (original) The detector of claim 5, wherein the distance between the anode and cathode is between 25 microns and 75 microns.
7. (previously presented) The detector of claim 5, wherein the eutectic bond is between the first and second wafers.

Application Serial No. 10/735531  
Reply to Office Action dated October 18, 2007

8. (previously presented) The detector of claim 7, further comprising a eutectic bond between the second and third wafers.
9. (original) The detector of claim 8, wherein the first, second and third wafers comprise silica.
10. (original) The detector of claim 9, wherein:
  - the first wafer has a conductor connected to the cathode for a connection external to the detector; and
  - the third wafer has a conductor connected to the anode for a connection external to the detector.
11. (original) The detector of claim 10, wherein the anode is a grid.
12. (original) The detector of claim 11, wherein:
  - the anode comprises a conductive metal; and
  - the cathode comprises a conductive metal.
- 13-19. (canceled)
20. (previously presented) Means for detecting comprising:
  - means for emitting electrons;
  - means for collecting electrons; and
  - means for containing a gas situated between the means for emitting electrons and the means for collecting electrons; and
  - wherein the means for emitting electrons, the means for collecting electrons and the means for containing a gas are situated within a wafer structure;

Application Serial No. 10/735531  
Reply to Office Action dated October 18, 2007

wherein the wafer structure comprises silica wafers bonded with a eutectic material.

21. (original) The means of claim 20, wherein light impinging the gas may cause a current flow between the means for emitting electrons and the means for collecting electrons.

22. (original) The means of claim 20, wherein:  
the gas comprises neon; and  
the light is UV.

23. (previously presented) A sensor comprising:  
a cathode wafer;  
a cavity wafer bonded to the cathode wafer; and  
an anode wafer bonded to the cavity wafer; and

wherein:

the cavity wafer has a cavity having first and second openings sealed by the  
cathode wafer and the anode wafer, respectively;  
the wafers comprise silica; and  
the wafers are bonded with a eutectic material.

24. (original) The sensor of claim 23, further comprising:  
a cathode situated on the cathode wafer proximate to the first opening of the  
cavity; and  
an anode situated on the anode wafer proximate to the second opening of the  
cavity.

25. (original) The sensor of claim 24, wherein the cavity has a light-admissible end.

Application Serial No. 10/735531  
Reply to Office Action dated October 18, 2007

26. (original) The sensor of claim 25, wherein the cavity contains a gas.
27. (original) The sensor of claim 26, further comprising electrical connections to the cathode and the anode.
28. (canceled)
29. (previously presented) The sensor of claim 26, wherein the gas comprises neon.
30. (original) The sensor of claim 29, wherein:  
the gas further comprises hydrogen; and  
the portion of neon in the gas is greater than fifty percent.
31. (original) The sensor of claim 24, wherein the cathode wafer, the anode wafer and cavity wafer comprise a plurality of cathodes, anodes and cavities, respectively, that forms a plurality of individual sensors.
32. (original) The sensor of claim 31, wherein the bonded cathode wafer, the anode wafer and cavity wafer are cut into individual chips.